

C. Kaufman

#13

1646

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/096,500A

DATE: 07/18/2000
TIME: 13:35:55

Input Set : A:\P1110Pl.txt
Output Set: N:\CRF3\07182000\I096500A.raw

ENTERED

RECEIVED

AUG 02 2000

TECH CENTER 1600/2900

3 <110> APPLICANT: Ashkenazi, Avi J.
4 Baker, Kevin P.
5 Chuntharapai, Anan
6 Gurney, Austin
7 Kim, Kyung Jin
8 Wood, William I.
10 <120> TITLE OF INVENTION: Apo-2DcR
12 <130> FILE REFERENCE: P1110Pl
14 <140> CURRENT APPLICATION NUMBER: US 09/096,500A
15 <141> CURRENT FILING DATE: 1998-06-12
17 <150> PRIOR APPLICATION NUMBER: US 60/049,911
18 <151> PRIOR FILING DATE: 1997-06-18
20 <160> NUMBER OF SEQ ID NOS: 17
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 259
24 <212> TYPE: PRT
25 <213> ORGANISM: Homo sapiens
27 <400> SEQUENCE: 1
28 Met Ala Arg Ile Pro Lys Thr Leu Lys Phe Val Val Val Ile Val
29 1 5 10 15
31 Ala Val Leu Leu Pro Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg
32 20 25 30
34 Gln Glu Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln Arg
35 35 40 45
37 His Ser Phe Lys Gly Glu Glu Cys Pro Ala Gly Ser His Arg Ser
38 50 55 60
40 Glu His Thr Gly Ala Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr
41 65 70 75
43 Thr Asn Ala Ser Asn Asn Glu Pro Ser Cys Phe Pro Cys Thr Val
44 80 85 90
46 Cys Lys Ser Asp Gln Lys His Lys Ser Ser Cys Thr Met Thr Arg
47 95 100 105
49 Asp Thr Val Cys Gln Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn
50 110 115 120
52 Ser Pro Glu Met Cys Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu
53 125 130 135
55 Val Gln Val Ser Asn Cys Thr Ser Trp Asp Asp Ile Gln Cys Val
56 140 145 150
58 Glu Glu Phe Gly Ala Asn Ala Thr Val Glu Thr Pro Ala Ala Glu
59 155 160 165
61 Glu Thr Met Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
62 170 175 180
64 Glu Thr Met Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
65 185 190 195
67 Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
68 200 205 210
70 Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/096,500A

DATE: 07/18/2000
 TIME: 13:35:55

Input Set : A:\P1110P1.txt
 Output Set: N:\CRF3\07182000\I096500A.raw

```

71          215          220          225
73 Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Ser Ser His Tyr
74          230          235          240
76 Leu Ser Cys Thr Ile Val Gly Ile Ile Val Leu Ile Val Leu Leu
77          245          250          255
79 Ile Val Phe Val
82 <210> SEQ ID NO: 2
83 <211> LENGTH: 1180
84 <212> TYPE: DNA
85 <213> ORGANISM: Homo sapiens
87 <220> FEATURE:
88 <221> NAME/KEY: CDS
89 <222> LOCATION: (193) . . . (969)
90 <223> OTHER INFORMATION:
92 <400> SEQUENCE: 2
93 gctgtgggaa cctctccacg cgcacgaact cagccaacga tttctgatag 50
95 atttttggga gtttgaccag agatgcaagg ggtgaaggag cgcttcctac 100
97 cgtttagggaa ctctggggac agagcgcccc ggccgcctga tggccgaggc 150
99 aggggtgcgac ccaggaccca ggacggcgtc gggaaccata cc atg 195
100 Met
101 1
103 gcc cgg atc ccc aag acc cta aag ttc gtc gtc gtc atc 234
104 Ala Arg Ile Pro Lys Thr Leu Lys Phe Val Val Val Ile
105 5 10
107 gtc gcg gtc ctg ctg cca gtc cta gct tac tct gcc acc 273
108 Val Ala Val Leu Leu Pro Val Leu Ala Tyr Ser Ala Thr
109 15 20 25
111 act gcc cgg cag gag gaa gtt ccc cag cag aca gtg gcc 312
112 Thr Ala Arg Gln Glu Glu Val Pro Gln Gln Thr Val Ala
113 30 35 40
115 cca cag caa cag agg cac agc ttc aag ggg gag gag tgt 351
116 Pro Gln Gln Gln Arg His Ser Phe Lys Gly Glu Glu Cys
117 45 50
119 cca gca gga tct cat aga tca gaa cat act gga gcc tgt 390
120 Pro Ala Gly Ser His Arg Ser Glu His Thr Gly Ala Cys
121 55 60 65
123 aac ccg tgc aca gag ggt gtg gat tac acc aac gct tcc 429
124 Asn Pro Cys Thr Glu Gly Val Asp Tyr Thr Asn Ala Ser
125 70 75
127 aac aat gaa cct tct tgc ttc cca tgt aca gtt tgt aaa 468
128 Asn Asn Glu Pro Ser Cys Phe Pro Cys Thr Val Cys Lys
129 80 85 90
131 tca gat caa aaa cat aaa agt tcc tgc acc atg acc aga 507
132 Ser Asp Gln Lys His Lys Ser Ser Cys Thr Met Thr Arg
133 95 100 105
135 gac aca gtg tgt cag tgt aaa gaa ggc acc ttc cgg aat 546
136 Asp Thr Val Cys Gln Cys Lys Glu Gly Thr Phe Arg Asn
137 110 115
139 gaa aac tcc cca gag atg tgc cgg aag tgt agc agg tgc 585

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/096,500A

DATE: 07/18/2000

TIME: 13:35:55

Input Set : A:\P1110P1.txt

Output Set: N:\CRF3\07182000\I096500A.raw

```

140 Glu Asn Ser Pro Glu Met Cys Arg Lys Cys Ser Arg Cys
141      120      125      130
143 cct agt ggg gaa gtc caa gtc agt aat tgt acg tcc tgg 624
144 Pro Ser Gly Glu Val Gln Val Ser Asn Cys Thr Ser Trp
145      135      140
147 gat gat atc cag tgt gtt gaa gaa ttt ggt gcc aat gcc 663
148 Asp Asp Ile Gln Cys Val Glu Glu Phe Gly Ala Asn Ala
149      145      150      155
151 act gtg gaa acc cca gct gct gaa gag aca atg aac acc 702
152 Thr Val Glu Thr Pro Ala Ala Glu Glu Thr Met Asn Thr
153      160      165      170
155 agc ccg ggg act cct gcc cca gct gct gaa gag aca atg 741
156 Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met
157      175      180
159 aac acc agc cca ggg act cct gcc cca gct gct gaa gag 780
160 Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu
161      185      190      195
163 aca atg acc acc agc ccg ggg act cct gcc cca gct gct 819
164 Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala
165      200      205
167 gaa gag aca atg acc acc agc ccg ggg act cct gcc cca 858
168 Glu Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro
169      210      215      220
171 gct gct gaa gag aca atg acc acc agc ccg ggg act cct 897
172 Ala Ala Glu Glu Thr Met Thr Thr Ser Pro Gly Thr Pro
173      225      230      235
175 gcc tct tct cat tac ctc tca tgc acc atc gta ggg atc 936
176 Ala Ser Ser His Tyr Leu Ser Cys Thr Ile Val Gly Ile
177      240      245
179 ata gtt cta att gtg ctt ctg att gtg ttt gtt t 970
180 Ile Val Leu Ile Val Leu Leu Ile Val Phe Val
181      250      255      259
W--> 181 gaaagacttc actgtggaag aaattccttc cttacctgaa aggttcaggt 1020
185 aggcgctggc tgaggcgcggg gggcgctgga cactctctgc cctgcctccc 1070
187 tctgtgtgtg tccacagac agaaacgcct gccctgccc caaaaaaaaa 1120
189 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1170
191 aaaaaaaaaa 1180
193 <210> SEQ ID NO: 3
194 <211> LENGTH: 299
195 <212> TYPE: PRT
196 <213> ORGANISM: Homo sapiens
198 <400> SEQUENCE: 3
199 Met Gln Gly Val Lys Glu Arg Phe Leu Pro Leu Gly Asn Ser Gly
200      1      5      10      15
202 Asp Arg Ala Pro Arg Pro Pro Asp Gly Arg Gly Arg Val Arg Pro
203      20      25      30
205 Arg Thr Gln Asp Gly Val Gly Asn His Thr Met Ala Arg Ile Pro
206      35      40      45
208 Lys Thr Leu Lys Phe Val Val Val Ile Val Ala Val Leu Leu Pro

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/096,500A DATE: 07/18/2000
 TIME: 13:35:55

Input Set : A:\Pl110P1.txt
 Output Set: N:\CRF3\07182000\I096500A.raw

```

209          50          55          60
211 Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg Gln Glu Glu Val Pro
212          65          70          75
214 Gln Gln Thr Val Ala Pro Gln Gln Gln Arg His Ser Phe Lys Gly
215          80          85          90
217 Glu Glu Cys Pro Ala Gly Ser His Arg Ser Glu His Thr Gly Ala
218          95          100          105
220 Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr Thr Asn Ala Ser Asn
221          110          115          120
223 Asn Glu Pro Ser Cys Phe Pro Cys Thr Val Cys Lys Ser Asp Gln
224          125          130          135
226 Lys His Lys Ser Ser Cys Thr Met Thr Arg Asp Thr Val Cys Gln
227          140          145          150
229 Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn Ser Pro Glu Met Cys
230          155          160          165
232 Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu Val Gln Val Ser Asn
233          170          175          180
235 Cys Thr Ser Trp Asp Asp Ile Gln Cys Val Glu Glu Phe Gly Ala
236          185          190          195
238 Asn Ala Thr Val Glu Thr Pro Ala Ala Glu Glu Thr Met Asn Thr
239          200          205          210
241 Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Asn Thr
242          215          220          225
244 Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
245          230          235          240
247 Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
248          245          250          255
250 Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
251          260          265          270
253 Ser Pro Gly Thr Pro Ala Ser Ser His Tyr Leu Ser Cys Thr Ile
254          275          280          285
256 Val Gly Ile Ile Val Leu Ile Val Leu Leu Ile Val Phe Val
257          290          295
259 <210> SEQ ID NO: 4
260 <211> LENGTH: 1180
261 <212> TYPE: DNA
262 <213> ORGANISM: Homo sapiens
264 <220> FEATURE:
265 <221> NAME/KEY: CDS
266 <222> LOCATION: (73) . . . (969)
267 <223> OTHER INFORMATION:
269 <220> FEATURE:
270 <221> NAME/KEY: sig_peptide
271 <222> LOCATION: (73) . . . (194)
272 <223> OTHER INFORMATION:
274 <400> SEQUENCE: 4
275 gctgtgggaa cctctccacg cgcacgaact cagccaacga tttctgatag 50
277 atttttggga gtttgaccag ag atg caa ggg gtg aag gag 90
278 Met Gln Gly Val Lys Glu

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/096,500A

DATE: 07/18/2000
 TIME: 13:35:55

Input Set : A:\P1110Pl.txt
 Output Set: N:\CRF3\07182000\I096500A.raw

```

279                                     -40                                     -35
281 cgc ttc cta ccg tta ggg aac tct ggg gac aga gcg ccc 129
282 Arg Phe Leu Pro Leu Gly Asn Ser Gly Asp Arg Ala Pro
283                                     -30                                     -25
285 cgg ccg cct gat ggc cga ggc agg gtg cga ccc agg acc 168
286 Arg Pro Pro Asp Gly Arg Gly Arg Val Arg Pro Arg Thr
287                                     -20                                     -15                                     -10
289 cag gac ggc gtc ggg aac cat acc atg gcc cgg atc ccc 207
290 Gln Asp Gly Val Gly Asn His Thr Met Ala Arg Ile Pro
291                                     -5                                     1                                     5
293 aag acc cta aag ttc gtc gtc gtc atc gtc gcg gtc ctg 246
294 Lys Thr Leu Lys Phe Val Val Val Ile Val Ala Val Leu
295                                     10                                     15
297 ctg cca gtc cta gct tac tct gcc acc act gcc cgg cag 285
298 Leu Pro Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg Gln
299                                     20                                     25                                     30
301 gag gaa gtt ccc cag cag aca gtg gcc cca cag caa cag 324
302 Glu Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln
303                                     35                                     40
305 agg cac agc ttc aag ggg gag gag tgt cca gca gga tct 363
306 Arg His Ser Phe Lys Gly Glu Glu Cys Pro Ala Gly Ser
307                                     45                                     50                                     55
309 cat aga tca gaa cat act gga gcc tgt aac ccg tgc aca 402
310 His Arg Ser Glu His Thr Gly Ala Cys Asn Pro Cys Thr
311                                     60                                     65                                     70
313 gag ggt gtg gat tac acc aac gct tcc aac aat gaa cct 441
314 Glu Gly Val Asp Tyr Thr Asn Ala Ser Asn Asn Glu Pro
315                                     75                                     80
317 tct tgc ttc cca tgt aca gtt tgt aaa tca gat caa aaa 480
318 Ser Cys Phe Pro Cys Thr Val Cys Lys Ser Asp Gln Lys
319                                     85                                     90                                     95
321 cat aaa agt tcc tgc acc atg acc aga gac aca gtg tgt 519
322 His Lys Ser Ser Cys Thr Met Thr Arg Asp Thr Val Cys
323                                     100                                     105
325 cag tgt aaa gaa ggc acc ttc cgg aat gaa aac tcc cca 558
326 Gln Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn Ser Pro
327 110                                     115                                     120
329 gag atg tgc cgg aag tgt agc agg tgc cct agt ggg gaa 597
330 Glu Met Cys Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu
331                                     125                                     130                                     135
333 gtc caa gtc agt aat tgt acg tcc tgg gat gat atc cag 636
334 Val Gln Val Ser Asn Cys Thr Ser Trp Asp Asp Ile Gln
335                                     140                                     145
337 tgt gtt gaa gaa ttt ggt gcc aat gcc act gtg gaa acc 675
338 Cys Val Glu Glu Phe Gly Ala Asn Ala Thr Val Glu Thr
339                                     150                                     155                                     160
341 cca gct gct gaa gag aca atg aac acc agc ccg ggg act 714
342 Pro Ala Ala Glu Glu Thr Met Asn Thr Ser Pro Gly Thr
343                                     165                                     170

```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

DATE: 07/18/2000

PATENT APPLICATION: US/09/096,500A

TIME: 13:35:56

Input Set : A:\P1110Pl.txt

Output Set: N:\CRF3\07182000\I096500A.raw

L:181 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2
L:371 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4
L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11